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What is claimed is:

1. A plate for projection lithography comprising:

a first opaque region located at the center of the plate; and
a second opaque region formed at an outer edge of the plate, said
first and second opaque regions defining an annular region therebetween,
said annular region being light transmissive and comprising a first light
transmissive area that imparts a first phase shift to light passing
therethrough and a second light transmissive area, which imparts a
second phase shift to light passing therethrough.

- 2. The plate of Claim 1 wherein said first light transmissive area comprises two opposed regions being substantially vertically oriented and on opposed portions of said annular region.
- 3. The plate of Claim 1 wherein said second light transmissive area comprises two opposed regions being substantially horizontally oriented and on opposed portions of said annular region..

4. The plate of Claim 1 wherein said second phase shift differs from said first phase shift by between 45 degrees and 315 degrees.

- 5. The plate of Claim 4 wherein said second phase shift differs from said first phase shift 180 degrees.
- 6. The plate of Claim 1 wherein said first light transmissive area has a first thickness and said second light transmissive area has a second thickness and the difference between said first and second light transmissive areas is equal to 1/(2n_{ref}) wavelengths of an illuminating light source.

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7. A plate for projection lithography comprising:

an opaque region; and

a first, second, third, and fourth light transmissive region formed around the periphery of said plate, said first and second light transmissive regions substantially vertically oriented and oppositely located and imparting a first phase shift to light passing therethrough, said third and fourth light transmissive regions substantially horizontally oriented and oppositely located and imparting a second phase shift to light passing therethrough.

- 8. The plate of Claim 1 wherein said second phase shift differs from said first phase shift by between 45 degrees and 315 degrees.
- 15 9. The plate of Claim 8 wherein said second phase shift differs from said first phase shift 180 degrees.
 - 10. The plate of Claim 1 wherein said first and second light transmissive areas have a first thickness and said third and fourth light transmissive area have a second thickness and the difference between said first and second and said third and fourth light transmissive areas is equal to 1/(2n_{ref}) wavelengths of an illuminating light source.

11. A plate aperture for use in a photolithographic system, comprising:a plate including:

an opaque region in the center of the plate;

a first light transmissive region;

a second light transmissive region located substantially opposite said first light transmissive region;

a third light transmissive region; and

a fourth light transmissive region located substantially opposite said third light transmissive region;

wherein light passing through said third and fourth light transmissive regions is phase shifted by a phase difference from light passing through said first and second light transmissive regions.

- 15 12. The aperture plate of Claim 11 further comprising a second opaque region located along an outer portion of said plate and wherein said opaque region and second opaque region define an annular region therebetween.
- 13. The aperture plate of Claim 11 wherein said first, second, third, and fourth20 light transmissive regions are formed within said light transmissive region.
 - 14. The aperture plate of claim 11 wherein said plate is formed of glass.

- 15. The plate of Claim 11 wherein said opaque region is comprised of a chromium film.
- 16. The plate of Claim 11 wherein said first and second light transmissive
- 5 regions have a first thickness and said third and fourth light transmissive regions have a second thickness.

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- 17. A system for projection lithography comprising:
 - a light source for illumination;
 - a photomask having formed thereon a pattern;
- a focusing lens adjacent to said photomask and aligned to be illuminated by light passing through said photomask; and an aperture comprising:

a plate;

an opaque region located substantially at the center of said plate; and

a first light transmissive area that imparts a first phase shift to light passing therethrough and a second light transmissive area, which imparts a second phase shift to light passing therethrough.

18. The system of Claim 17 wherein said first light transmissive area comprises a first and second sector being substantially vertically aligned and located substantially oppositely on said plate and wherein said second light transmissive area comprises a third and fourth sector being substantially horizontally aligned and located substantially oppositely on said plate.

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19. The system of claim 18 wherein said first phase shift or said second phase shift is zero degrees.

- 20. The system of claim 17 wherein said first phase shift and said second phase shift differ by between 45 and 315 degrees.
- The system of claim 17 wherein said aperture comprises an annular
 aperture and said first and second light transmissive areas are formed within a
 light transmissive annular region of said aperture.

22. A method of photolithographically imposing a pattern on a semiconductor wafer, comprising the steps of:

coating the wafer with a resist layer;

providing a coherent light illumination source;

deriving incoherent light from said illumination source by passing light from said illumination source through an aperture, the aperture having a opaque region in its center and having a first light transmissive area that imparts a first phase shift on light passing therethrough and a second light transmissive area that imparts a second phase shift on light passing therethrough;

passing said incoherent light through a photomask having a pattern formed thereon; and

illuminating the resist layer with the incoherent light after the incoherent light has passed through said photomask.

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- 23. The method of claim 22 wherein said first phase shift is zero degrees.
- 24. The method of claim 22 wherein said first phase shift and said second phase shift differ by between 45 degrees and 315 degrees.

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